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MORTON ARBORETUM
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## TREES OF THE MORTON ARBORETUM VIII

*Carya laciniosa* (Michx. Loud.), Big Shellbark Hickory

Rich river bottomlands subject to periodical overflowing provide the preferred habitat for this largest leaved of all hickories, the so called Bottom Shellbark Hickory or Kingnut. In Illinois its distribution is confined largely to the Southern part of the state although it occurs as far north as Peoria and Hancock counties. Unlike the more abundant Shagbark Hickory it does not grow in pure stands, but rather in association with other lowland trees such as Elm, American Ash, Silver Maple, Shagbark Hickory, White and Pin Oaks. A large tree in the wild, averaging 50 to 90 feet, sometimes 120, with a trunk 2 or 3 feet in diameter, its general appearance closely resembles *Carya ovata.* Its oval head shows a similar regularity although the lower of its short side branches tend to droop. The light gray bark is also shaggy, furnishing the basis for the tree's specific name.

King-sized foliage is one of the most characteristic ear-marks of the Big Shellbark, the large compound leaves ranging from 15 to 22 inches in length. They are composed of 5, or more usually 7 to 9 sessile leaflets, 4 to 9 inches long, 3 to 4 wide, dark green in color with lighter, soft pubescent undersurfaces. Neither their oblong lanceolate shape nor paired arrangement along stout, somewhat flattened petioles is unusual among the hickories, though the persistence of the petioles into the winter provides an unfailing means of identification. So too do the large terminal buds and the twigs of yellowish cast.

Hickory flowers are inconspicuous in both color and size and in no way comparable beautywise to the enlarging buds and unfolding leaves. The close observer will notice them in May, however, the staminate inflorescences in 5 to 8 inch catkins arranged 3 to a cluster and hanging from short pendulous stalks, the pistillate in 2 to 5 flowered spikelets at the tips of the new growth.

Like the foliage the fruit is also over-sized, the globose, rather woody husks averaging from 1¼ to 2½ inches in diameter. They split open to reveal thick shelled, prominently ridged yellow or reddish brown nuts with delicately flavored kernels. In market they are known as king-nuts.

The largest Big Shellbark Hickory in the Arboretum, the 25 foot tree illustrated, is located along the north side of Forest Road opposite the Elm Collection. It was planted in 1940, and has not yet begun to bear.

*Carya pecan* (Marsh. Engl. and Graebn.), Pecan

Utility and beauty are generously combined in the largest, fastest growing and longest lived of all hickories, the stately Pecan, a tree better known for its delectably flavored nuts than for its ornamental qualities. Once one is familiar with a well developed mature specimen, however, an increased respect for the landscape potentialities of the species is inevitable. For, like the American Elm, the crown of older trees spreads into an imposing broad dome supported by a massive urn shaped branch structure. Heights up to 150 feet and trunk diameters of more than 6 are on record, extremes encountered only in crowded plantings. Where ample space prevails 50 or 75 feet is the more usual height. In either case the trunks are clothed with light brown or grayish bark, furrowed but not shaggy. Compared with other hickories the wood is of little commercial value, being hard but brittle and weak.

The tree's foliage mass is not heavy, being composed of from 11 to 17 graceful sickle shaped leaflets set, with the exception of the odd terminal one, in pairs along the petioles. They present a uniform medium green appearance although the lower surfaces are paler and softly pubescent. Both the midrib and veins are yellowish. Complete leaves are arranged alternately on the hairy, later smooth branchlets marked with conspicuous orange lenticels, and vary from 12 to 20 inches in size. In contrast the individual leaflets composing them range from 4 to 8 inches long and 1 to 3 in width. They are long pointed, serrate margined and closely seated on the petioles. Their fall color change is to yellow.

Pecan flowers appear entirely without fanfare, the slender, pendulous, greenish yellow pollen bearing catkins (3-5″) in May, in clusters, largely from buds formed in the axils of leaves of the preceding year; the less conspicuous greenish seed bearing inflorescences in from few to many flowered spikes at the ends of the branches.

Pecan fruit needs no introduction, the sweet flavored kernels having long been an important article of commerce. Released in September and October from thin, brittle, four parted often persistent husks, the reddish brown nuts occur in clusters of from 3 to 11. They are of good size, 1 to 2½ inches long and from ½ to 1 inch broad, have pointed apexes, rounded bases and shells of variable thickness. Numerous clones have been selected on the basis of superiority of fruit (thin shells, large kernels etc.)

Being a tree of low rich bottomlands, the Pecan is indigenous to a comparatively limited area of the midsection of the United States, chiefly the Mississippi Valley from southern Iowa, Illinois and Indiana southward to Mississippi, Louisiana and Texas. Cultivation has further extended the range into other areas. In Illinois it has been found along the Illinois river as far northward as Peoria County and along the Mississippi to the southern limits of Jo Daviess County, but it cannot be counted on to produce fruit north of the 39th parallel.

E. L. Kammerer

This 30 foot specimen along Forest Road is the largest Pecan, *Carya pecan,* in the Arboretum collection.

The Big Shellbark Hickory, *Carya laciniosa,* along Forest Road.

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